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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------|
| 10/761,677  | 01/21/2004  | Robert A. Donaldson  | 1011904                 | 3144             |
| 22824   | 7590        | 07/19/2004           | EXAMINER                |                  |
| DONALD R. SCHOONOVER<br>4211 ROLLING HILLS DRIVE<br>NIXA, MO 65714-8771 |             |                      | SCHWARTZ, CHRISTOPHER P |                  |
|   |             | ART UNIT             | PAPER NUMBER            |                  |
|   |             |                      | 3683                    |                  |

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                  |  |
|------------------------------|-----------------|------------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s)     |  |
|                              | 10/761,677      | DONALDSON ET AL. |  |
| Examiner                     | Art Unit        |                  |  |
| Christopher P. Schwartz      | 3683            | MW               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5 and 9-15 is/are rejected.
- 7) Claim(s) 6-8 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- Notice of References Cited (PTO-892)
- Notice of Draftsperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 3.

- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Information Disclosure Statement***

1. The information disclosure statement has been received and considered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3,9-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Schuck '761 in view of U.S. publication to Robinson et al. '908.

Regarding claim 1 Schuck discloses a towed vehicle braking system comprising a transmitter and receiver on the towing and towed vehicles at 800 and 802 for receiving radio signals therebetween, a linkage mechanism 131, 106,

133 and 403 and a sensing mechanism at 607A. Note also the LED discussed in col. 2 permitting the operator to ascertain that the brake system of the towing vehicle has been actuated.

Schuck lacks the specifics of the braking sensor.

From col 1 lines 49-52 Schuck discloses that it may be desirable to preclude the trailer brakes from actuation in certain circumstances.

U.S. publication '908 is relied upon ~~to~~ for the discussion of various known prior art brake systems and the use of accelerometers which sense desired deceleration and can adjust the braking levels accordingly. Note the modulated signal discussed at the bottom of page 5.

One having ordinary skill in the art at the time of the invention would have found it obvious to have used an accelerometer, as taught by '908, as a substitute for the inertia switch 607a to transmit desired braking signals between the trailer and towing vehicle as such a substitution would merely amount to an alternative equivalent arrangement to that of Schuck dependent upon such well known factors as cost, availability and functionality.

Regarding claims 2,3 the limitations of parts b) and c) (of claim 2) would be an obvious modification to the references above simply to offer more stability control to the vehicle/trailer combination. Such may be the case to prevent jack-knifing (under certain road conditions) or to prevent excessive braking (to save on wear and tear of the trailer brakes), when not needed and to provide increased braking when needed upon emergency stops.

Regarding claim 9 these limitations are considered to be obvious dependent upon the desirability of actuation of the trailer brakes as it is known to use the brake lights as a signal for this purpose.

The limitations of claims 10-12 are considered to be obvious in that it is known to provide the operator manual control over when the trailer brakes are actuated.

Regarding claim 13 these limitations are obvious in light of the fact that the system of Schuck, as modified, may be made more portable in that the pump 130 etc may be adapted to be plugged into a cigarette lighter, as is known in the art.

Regarding claims 14,15 simply to configure the transmitter and receiver of Schuck, as modified, with "extra circuitry", as broadly claimed, to transmit additional useful data between the tow and trailer vehicles such as brake temperature, gradient, or for other reasons such as redundant power controls or manual control by the operator would have been an obvious expedient to the ordinary skilled worker in the art. It is noted applicant is not specific in the specification as to the reason for the third and fourth circuitry.

5. Claims 4,5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuck in view of U.S. pub '908 as applied to claims 2,3 above, and further in view of Stumpe.

Regarding claims 4,5 although Schuck, as modified, lacks the specifics of the braking system Stumpe is relied upon to provide a general teaching of a well known pneumatic brake system used for towed/trailer vehicle combinations.

Note the valves at 22,24 or 112-118 which are actuated dependent upon the desired deceleration from the operator.

One having ordinary skill in the art at the time of the invention would have found it obvious to have used the system of Schuck, as modified, with a known pneumatic brake system, as taught by Stumpe, simply to offer easier control over the level of braking between the towing vehicle and towed vehicle with wireless communications.

***Allowable Subject Matter***

6. Claims 6-8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the wireless communication used in the systems of Cook and MacGregor et al. Note the use of the cigarette lighters in Decker, Harness and Hargrove..

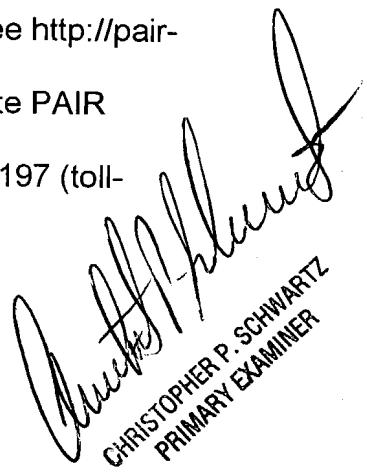
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Lavinder can be reached on 703-308-3421. The

fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps  
7/14/04



Christopher P. Schwartz  
PRIMARY EXAMINER